

CLAIMS

What is claimed is:

1. A press apparatus for pressing a wire into an associated connector, the connector being carried on an elongated strip, the connector having an opening at a top thereof and being stored on the strip in a side-ways orientation, the connector being fed into the press on the strip, the press apparatus comprising:

a feed path, the feed path having a reorienting section adapted to receive the connector on the strip in the side-ways orientation and to reorient the connector to position the opening of the connector in an upward orientation;

a guide portion defining a conveyance path and a conveyance direction for the connector, the guide portion having opposing walls;

a one-way feed assembly to feed the connector in the conveyance direction and to prevent reverse movement of the connector opposite the feed direction, the feed assembly including a retaining portion and a feed portion disposed opposite the retaining portion;

a reciprocating press, the reciprocating press having a die operably connected thereto, the reciprocating press configured to reciprocate to move the die to press the wire into the connector when the wire is positioned above the connector opening; and

a linkage operably connecting the feed assembly and the reciprocating press wherein movement of the reciprocating press advances the connector along the conveyance path to position the connector opening below the die for pressing a wire into the opening.

2. The press apparatus in accordance with claim 1 including a wire guide for positioning the wire above the connector opening.

3. The press apparatus in accordance with claim 1 including a strip separator disposed downstream of the reciprocating press for separating the connector from the strip.

4. The press apparatus in accordance with claim 1 wherein the feed assembly includes a feed pawl configured to reciprocate and to move the connector into a position below the die.

5. The press apparatus in accordance with claim 4 wherein the feed pawl is operably connected to the linkage.

6. The press apparatus in accordance with claim 4 wherein the feed pawl includes a plurality of teeth for engaging the connector.

7. The press apparatus in accordance with claim 6 wherein the teeth are asymmetrical.

8. The press apparatus in accordance with claim 1 including a brake assembly configured to releasably secure the connector in position under the die.

9. The press apparatus in accordance with claim 8 wherein the brake assembly is biased toward the conveyance path.

10. The press apparatus in accordance with claim 8 wherein the brake assembly includes a plurality of teeth for engaging the connector.

11. The press apparatus in accordance with claim 1 wherein the reciprocating press includes a cam for engaging the linkage.

12. The press apparatus in accordance with claim 4 wherein the reciprocating press includes a cam for engaging the linkage, and wherein the linkage is operably connected to the feed pawl.

13. The press apparatus in accordance with claim 1 wherein an upstroke of the reciprocating press advances the one-way feed assembly to move the connector to a position below the die.

14. The press apparatus in accordance with claim 1 including a trimmer for trimming an end of the wire in conjunction with pressing the wire into the connector.

15. The press apparatus in accordance with claim 14 wherein the trimmer is adjustable.

16. The press in accordance with claim 1 wherein the feed path includes a chute defined by guide walls.

17. The press in accordance with claim 16 wherein the guide walls define an entry section.

18. The press in accordance with claim 17 wherein the entry section includes a lower guide wall extending rearwardly beyond an upper guide wall.

19. The press in accordance with claim 1 wherein the reorienting section is defined by a twist section.

20. A press apparatus for pressing a wire into an associated connector, the connector being carried on an elongated strip, the connector having an opening at a top thereof and being stored on the strip in a side-ways orientation, the connector being fed into the press on the strip, the press apparatus comprising:

a feed path having a twisted section adapted to receive the connector on the strip in the side-ways orientation and to rotate the connector to position the opening of the connector in an upward orientation;

a guide portion defining a conveyance path and a conveyance direction for the connector;

means for one-way feeding the connector in the conveyance direction;

means for preventing reverse movement of the connector in a direction opposite the conveyance direction;

a reciprocating press, the reciprocating press having a die operably connected thereto, the reciprocating press configured to reciprocate to move the die to press the wire into the connector when the wire is positioned above the connector opening; and

means operably connecting the one-way feed means and the reciprocating press.

21. The press apparatus in accordance with claim 20 including means for laterally restraining movement of the connectors.

22. The press apparatus in accordance with claim 20 including means for indexing movement of the connector through the press apparatus.

23. The press apparatus in accordance with claim 20 wherein the means operably connecting the one-way feeding includes linkage means.

24. The press in accordance with claim 20 wherein the feed path includes a chute defined by guide walls.

25. The press in accordance with claim 24 wherein the guide walls define an entry section.

26. The press in accordance with claim 25 wherein the entry section includes a lower guide wall extends rearwardly beyond an upper guide wall.

27. A press apparatus for pressing a wire into an associated connector, the connector being carried on an elongated strip, the connector having an opening at a top thereof and being stored on the strip in a side-ways orientation, the connector being fed into the press on the strip, the press apparatus comprising:

a feed path, the feed adapted to receive the connector on the strip in the side-ways orientation and to reorient the connector to position the opening of the connector in an upward orientation;

a guide portion defining a conveyance path and a conveyance direction for the connector, the guide portion having opposing walls;

a one-way feed assembly to feed the connector in the conveyance direction and to prevent reverse movement of the connector opposite the feed direction, the feed assembly including a retaining portion and a feed portion disposed opposite the retaining portion;

a wire guide for positioning the wire above the connector opening;

a reciprocating press, the reciprocating press having a die operably connected thereto, the reciprocating press configured to reciprocate to move the die to press the wire into the connector when the wire is positioned above the connector opening;

a linkage operably connecting the feed assembly and the press wherein movement of the reciprocating press advances the connector along the conveyance

path to position the connector opening below the die for pressing a wire into the opening; and

a strip separator disposed downstream of the reciprocating press for separating the connector from the strip.

28. The press apparatus in accordance with claim 27 wherein the feed assembly includes a feed pawl configured to reciprocate and to move the connector into a position below the die and an opposing a guide wall, the apparatus including a brake assembly configured to restrain movement of the connector when it is in position below the die.

29. The press apparatus in accordance with claim 28 wherein the feed pawl includes an engaging surface for engaging the connector.

30. The press apparatus in accordance with claim 29 wherein the engaging surface includes a plurality of asymmetrical teeth

31. The press apparatus in accordance with claim 28 wherein the feed pawl is operably connected to the linkage.

32. The press apparatus in accordance with claim 28 wherein the reciprocating press includes a cam for engaging the linkage, and wherein the linkage is operably connected to the feed pawl.

33. The press apparatus in accordance with claim 27 wherein an upstroke of the reciprocating press advances the one-way feed assembly to move the connector to a position below the die.

34. The press in accordance with claim 27 wherein the feed path includes a chute defined by guide walls.

35. The press in accordance with claim 34 wherein the guide walls define an entry section.

36. The press in accordance with claim 35 wherein the entry section includes a lower guide wall extending rearwardly beyond an upper guide wall.

37. The press in accordance with claim 27 wherein the chute includes a twist section.